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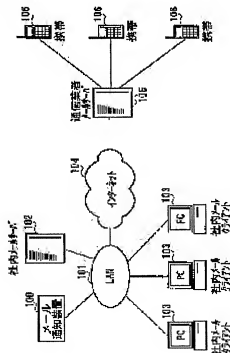
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(54) MAIL REPORT DEVICE AND PORTABLE TELEPHONE SYSTEM

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a convenient mail report device and a portable telephone system, by which the incoming of an electronic mail is recognized even when a user is out.

SOLUTION: The mail address of a portable telephone is registered in accordance with the electronic mail address of a private mail account 103, it is judged whether the incoming of the electronic mail exists or not concerning the electronic mail address and it is reported that the electronic mail is received in the case of the incoming of the electronic mail to the portable telephone 106 by the electronic mail via the Internet 104 and a communication enterprise mail server 105.



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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to the cell phone unit which can receive the mail report device which notifies the arrival of an E-mail, and this notice.

[0002]

[Description of the Prior Art] The information and telecommunications between remote computers are briskly used with the spread of the Internet in recent years. As a means to perform the information and telecommunications between personal computers (henceforth "PC"), an E-mail corresponds, for example.

[0003] Usually, when using an E-mail, a user contracts with a provider and transmits an E-mail to the mail server which the provider has. In a provider, an E-mail can be transmitted to a desired address by transmitting to the mail server according to an address. On the other hand, when checking the arrival of an E-mail, after starting PC etc., the user can connect with a provider and can check the arrival of an E-mail by taking out the E-mail stored in the mail server which a provider has.

[0004]

[Problem(s) to be Solved by the Invention] However, since it is necessary to connect with a provider and to check the existence of the arrival of an E-mail after starting PC etc. when checking the arrival of an E-mail as mentioned above, the user has to stand by at a place with PC etc. However, when the user is out, there are not few cases where the E-mail is transmitted. In such a case, the user is carrying only means of communication, such as a cellular phone, in many cases, and it is difficult for the information on the purport that a message was received in the E-mail in the mail server which a provider has to come to hand.

[0005] This invention is made in view of this point, and is a thing.

The purpose is for ** to also provide the mail report device and cell phone unit excellent in convenience which can recognize the arrival of an E-mail.

[0006]

[Means for Solving the Problem] This invention makes a storage parts store memorize a mail address of a cellular phone corresponding to a predetermined e-mail address. It judges whether a predetermined e-mail address has the arrival of an E-mail, and when there is arrival of an E-mail, it is notified that a message was received in an E-mail to a mail address of a corresponding cellular phone by E-mail.

[0008]

[0009]When that predetermined mail address has the arrival of an E-mail at the time of going out of the user of a predetermined mail address according to this composition, Since the incoming call notice mail in which having received a message in the E-mail is shown is transmitted to a cellular phone, also in the time of going out, the user can recognize the arrival of the E-mail to a predetermined e-mail address.

[0011] Since according to this composition it is collectively transmitted to a cellular phone by the text of an E-mail when transmitting incoming call notice mail, the user can recognize the contents of that E-mail with a cellular phone.

[0013] According to this composition, when the text of an E-mail is the number of characters which can be displayed with a cellular phone, the text of an E-mail is transmitted. For this reason, the user can recognize the contents of the E-mail which received a message in the predetermined e-mail address with a cellular phone.

[0015] Since according to this composition only the number of characters which can

be displayed with a cellular phone is transmitted when the text of the E-mail is over the number of characters which can be displayed with the cellular phone corresponding to the mail address of a cellular phone, the user can recognize the contents of the E-mail to some extent with a cellular phone.

[0016]The mail report device concerning the 5th mode of this invention takes the composition which said control section makes transmit incoming call notice mail of multi-part mail to said mail sending part when said E-mail which received a message is multi-part mail in the 1st to 4th mode.

[0017]When that predetermined mail address has the arrival of multi-part mail at the time of going out of the user of a predetermined mail address according to this composition, Since incoming call notice mail of the multi-part mail in which the arrival of the multi-part mail is shown is transmitted to a cellular phone, at the time of going out, the user can recognize the arrival of multi-part mail.

[0018]The mail report device concerning the 6th mode of this invention takes the composition which judges the arrival of the E-mail to said predetermined e-mail address by which said control section was set as the mail server in the 1st to 5th mode.

[0019]Since the arrival of the E-mail to the predetermined e-mail address registered into the mail server is judged according to this composition, When two or more predetermined e-mail addresses are set as the mail server, the arrival of the E-mail to two or more of the e-mail addresses can be notified to a corresponding cellular phone.

[0020]The cell phone unit concerning the 7th mode of this invention has a mail address corresponding to said predetermined e-mail address, and takes the composition which can receive said incoming call notice mail from the mail report device concerning the 1st to 6th mode.

[0021]Since incoming call notice mail is receivable from a mail report device according to this composition, the user of a cellular phone can recognize that the E-mail etc. received a message in the predetermined mail address.

[0022]The mail notification method concerning the 8th mode of this invention, As opposed to the mail address of the cellular phone beforehand registered corresponding to said predetermined e-mail address when it judged whether a predetermined e-mail address has the arrival of an E-mail and said predetermined e-mail address had the arrival of an E-mail, It is reported that a message was received in the E-mail by E-mail.

[0023]Hereafter, an embodiment of the invention is described in detail with reference to drawings.

[0024]Drawing 1 is a schematic diagram showing the network with which the mail report device 100 concerning the 1 embodiment of this invention operates.

[0025]As shown in drawing 1, the mail report device 100 of this embodiment is formed on LAN101 built in the company. The company mail server 102 and the in-company mail client 103 which comprises a PC etc. are connected to LAN101. This mail report device 100 is connected to the Internet 104 via this LAN101. And this mail report device 100 can access a carrier's mail server (henceforth a "carrier mail server") 105 via this Internet 104.

[0026]The company mail server 102 receives the E-mail from the Internet 104 via LAN101. And the company mail server 102 stores the received E-mail in the mail box corresponding to the mail address. The in-company mail client 103 takes out the

E-mail, when the company mail server 102 is accessed and the E-mail is stored in the corresponding mail box based on predetermined timing or predetermined directions. Thereby, the in-company mail client 103 can receive an E-mail from the Internet 102.

[0027]On the other hand, the carrier mail server 105 performs communication of the cellular phone 106 and electronic mail data on radio based on the carrier's original communications protocol. Thereby, the cellular phone 106 can transmit and receive an E-mail between the Internet 102.

[0028]In the network with which this mail report device 100 was constituted in this way, The arrival of the E-mail stored in the mail box of the company mail server 103 is notified to the predetermined cellular phone 106 by E-mail (the E-mail which notifies the arrival of an E-mail is hereafter called "incoming call notice mail"). Hereafter, the composition and control of this mail communication device 100 are explained.

[0029]Drawing 2 shows the hardware block diagram of this mail report device 100.

[0030]In drawing 2, CPU(central processing unit) 201 performs processing of the purpose according to a program. ROM(Read Only Memory) 202 is the read-only memory which stored the execution program of the transmitting-address conversion program [for the execution program for transmitting and receiving an E-mail, and the incoming call notice of the E-mail mentioned later], and incoming call notice mail sake. RAM(Random Access Memory) 203 is main memory which CPU201 reads a program and data and performs. LAN controller 204 performs a procedure required in order to transmit and receive data on LAN101. By executing the execution program for transmission and reception of the E-mail with which CPU201 was stored in ROM202, as for this mail report device 100, transmission and reception of an E-mail are realized via LAN controller 204 and LAN101.

[0031]It is connected to the indicators 207, such as the input parts 206, such as a keyboard of the device exterior, and a display, or the hard disk part (henceforth an "HD part") 208 inside a device, and the I/F control section 205 controls data with these.

[0032]The input part 206 is used when a user inputs a predetermined command, data, etc. into this mail report device 100. The indicator 207 is used when displaying the present state and predetermined data of this mail report device 100.

[0033]The data mainly used for control of this mail report device 100 is stored in HD part 208. In particular, the mail address translation table 300 as shown in drawing 3 is stored in HD part 208.

[0034]As shown in drawing 3, when the in-company mail client 103 takes out an E-mail from the mail box of the company mail server 102, the in-company mail account 301 and the password 302 which are used as an identification code are registered into the mail address translation table 300. These in-company mail accounts 301 and passwords 302 are registered corresponding to the mail address (henceforth a "cellular-phone mail address") 303 of the cellular phone 106 which the user of the in-company mail client 103 owns. The in-company mail account 301, the password 302, and the cellular-phone mail address 303 which were registered can be updated.

[0035]Next, operation in case the mail report device 100 which has the above-mentioned composition transmits incoming call notice mail to the predetermined cellular phone 106 is explained using drawing 4.

[0036] In transmitting incoming call notice mail to the predetermined cellular phone 106 from this mail report device 100, the setting out is needed beforehand. That is, when the user of the in-company mail client 103 goes out, setting out which transmits incoming call notice mail is needed for the cellular phone 106 owned from the user to this mail communication device 100.

[0037] According to this embodiment, it shall be set up so that "Taro.Matsushita"301a of the in-company mail account 301 shown in drawing 3 and "Saburo.Matsushita"301b may transmit incoming call notice mail. That is, it has set up notify to the cellular phone 106 with which the user of this in-company mail account 301 owns the arrival of an E-mail by going out etc.

[0038] As mentioned above, if this mail report device 100 will supervise whether predetermined time passed if transmission of incoming call notice mail is set up, and predetermined time passes (ST401), it will connect with the company mail server 102 (ST402). The IP address of the company mail server 102 shall be beforehand set to this mail report device 100. Here, although progress of predetermined time is judged and connection with the company mail server 102 is made, when a user inputs predetermined directions, it may be made to make connection with the company mail server 102 to this mail report device 100.

[0039] When it connects with the company mail server 102, this mail report device 100 is 1 record reading **** (ST403) about the mail address translation table 300 stored in HD part 208 to mail account data.

[0040] At this time, this mail report device 100 reads the record of the mail account data in which transmission of incoming call notice mail is set up. Thereby, only what needs to transmit incoming call notice mail can be read out of all the mail account data registered into the mail address translation table 300. Thereby, the time which transmitting processing of incoming call notice mail takes can be shortened. Here, this mail report device 100 reads the mail account data of "Taro.Matsushita"301a first.

[0041] and this mail report device 100 is alike, and logs in to applicable account of the read record (ST404). At this time, this mail report device 100 logs in to applicable account using the in-company mail account 301 and the password 302 of mail account data which were read from the mail address translation table 300. Here, this mail report device 100 logs in to "Taro.Matsushita"301a first.

[0042] If logged in to applicable account, this mail report device 100 will ask the company mail server 102. And based on the response from the company mail server 102, it is judged whether the E-mail is stored in the mail box corresponding to the applicable account (ST405). That is, this mail report device 100 judges whether the E-mail is stored in the mail box corresponding to "Taro.Matsushita"301a.

[0043] In this embodiment, an E-mail shall not be stored in the mail box corresponding to "Taro.Matsushita"301a, but the E-mail shall be stored in the mail box corresponding to "Saburo.Matsushita"301b.

[0044] Since the E-mail is not stored in applicable account, i.e., the mail box corresponding to "Taro.Matsushita"301a, here, this mail report device 100, it is judged whether there is any mail account data in which transmission of incoming call notice mail is set as the mail address translation table 300 (ST406).

[0045] Since transmission of incoming call notice mail is set as "Saburo.Matsushita"301b, here, this mail report device 100, The mail account data to read is updated (ST407) and it is 1 record reading *** (ST403) about mail

account data from the mail address translation table 300 again.

[0046]That is, this mail report device 100 reads the mail account data of "Saburo.Matsushita"301b. And this mail report device 100 logs in to "Saburo.Matsushita"301b, as mentioned above (ST404). This "Saburo.Matsushita" It is judged whether the E-mail is stored in the mail box corresponding to 301b (ST405).

[0047]Since the E-mail is stored in the mail box corresponding to "Saburo.Matsushita"301b here, the E-mail which has received a message judges this mail report device 100 in multi-part mail (ST408). Specifically, it is judged whether this mail report device 100 has an attached file by reading the header of the E-mail which has received a message. Here, the E-mail which received a message shall be what is called multi-part mail with an attached file.

[0048]After judging whether the E-mail which has received a message is multi-part mail, this mail report device 100 is connected to the carrier mail server 105 via LAN101 and the Internet 104 (ST409). At this time, the IP address of the carrier mail server 105 shall be beforehand set to this mail report device 100.

[0049]Since the E-mail which has received a message is multi-part mail, this mail report device 100, Now, incoming call notice mail of the multi-part mail in which the arrival of multi-part mail is shown is transmitted to the cellular-phone mail address 303 of the read mail account data (ST410). In other words, this mail report device 100 reports by E-mail that the purport that a message was received in the E-mail, and its E-mail are multi-part mails to the cellular-phone mail address 303 of the read mail account data now.

[0050]As opposed to the cellular-phone mail address 303b (09023456789@xxx.co.jp) specifically corresponding to "Saburo.Matsushita"301b in this mail report device 100, By transmitting a predetermined fixed form sentence by E-mail, it is reported that the purport that a message was received in the E-mail, and its E-mail are multi-part mails by E-mail. The predetermined fixed form sentence received a message in "E-mail, for example. The E-mail which received a message is multi-part mail. It comprises short sentence forms, such as ". In the cellular phone 106, this message is displayed on indicators, such as a display.

[0051]Thereby, the user of the cellular phone 106 can recognize having received a message in the E-mail in the mail address corresponding to the in-company mail client 103 in a place where one has gone etc. For this reason, the user of the cellular phone 106 can process reading that E-mail that received a message from PC of a place where one has gone etc.

[0052]If it reports by E-mail that the purport that a message was received in the E-mail, and its E-mail are multi-part mails to the applicable cellular-phone mail address 303b, this mail report device 100 will cut connection with the carrier mail server 105 (ST411).

[0053]And it is judged whether this mail report device 100 has the mail account data in which transmission of incoming call notice mail was set as the mail address translation table 300 (ST406). After processing ST407 as mentioned above when there is mail account data in which transmission of incoming call notice mail was set up, processing is returned to ST403 and ST403-ST411 are processed again. On the other hand, when there is no mail account data in which transmission of incoming call notice mail was set up, this mail report device 100 ends processing.

[0054]Since the mail account data in which transmission of incoming call notice mail was set up is only two, "Taro.Matsushita"301a and "Saburo.Matsushita"301b,

here, In ST406, it is judged that there is no mail account data in which transmission of incoming call notice mail was set up. For this reason, this mail report device 100 ends processing.

[0055]And this mail report device 100 will perform processing from ST401, if predetermined time passes again.

[0056]An E-mail usual in the E-mail which has received a message in judgment of ST408, That is, when it is an E-mail without an attached file, this mail report device 100 is connected to the carrier mail server 105 via LAN101 and the Internet 104 like the case where the E-mail which has received a message is multi-part mail (ST409). And this mail report device 100 transmits now the incoming call notice mail in which the arrival of the usual E-mail is shown to the cellular-phone mail address 303 of the read mail account data (ST412). In other words, this mail report device 100 reports by E-mail that a message was received in the E-mail to the cellular-phone mail address 303 of the read mail account data now. In reporting by E-mail that a message was received in the E-mail, as mentioned above, it notifies by transmitting a predetermined fixed form sentence by E-mail.

[0057]In ST412, when reporting by E-mail that a message was received in the E-mail, the contents of the text of an E-mail are judged, and when there is less the text than the predetermined number of characters, it may change so that the contents of the text of the E-mail may be transmitted. When it changes in this way, the user of the cellular phone 106 can judge the contents of the E-mail. Therefore, it can judge in what should be read according to the contents of the E-mail. It can prevent that this reads an unnecessary E-mail. Since the contents of the text of an E-mail will be prevented from breaking off on the way if it is the number only of characters which can be displayed by the indicator of the cellular phone 106, the predetermined number of characters in this case is more effective.

[0058]When an E-mail can be read by the indicator of the cellular phone 106, it may be made to delete the E-mail from the mail box of the company mail server 102. That is, when an E-mail can be checked with the cellular phone 106, it may be made to prevent taking out the E-mail in the in-company mail client 103 again by deleting from the mail box of the company mail server 102. When it changes in this way, the number of the E-mails stored in the mail box of the company mail server 102 is reduced.

[0059]When there are more contents of the text of an E-mail than the predetermined number of characters, it starts as it can display by the indicator of the cellular phone 106 among the contents of the text of the E-mail, and may be made to transmit. even when it changes in this way, since the contents of the until E-mail can be grasped to some extent, the user of the cellular phone 106 can judge the contents of the E-mail like the case where there are few contents of the text of an E-mail than the predetermined number of characters. Therefore, it can judge according to the contents of the E-mail in what should be read.

[0060]Thus, according to the mail report device 100 of this embodiment, it connects with the company mail server 102, When the E-mail is stored in the mail box corresponding to the predetermined in-company mail account 301, that is notified by E-mail to the cellular-phone mail address 303 corresponding to the in-company mail account 301. For this reason, the user of the cellular phone 106 can recognize having received a message in the E-mail in the mail address corresponding to the in-company mail client 103. For this reason, the user of the cellular phone 106 can

process reading that E-mail that received a message from PC of a place where one has gone etc.

[0061]The mail report device 100 of this embodiment, When multi-part mail receives a message in the mail address corresponding to the predetermined in-company mail account 301, The purport that a message was received in the E-mail, and its E-mail report by E-mail that it is multi-part mail to the cellular-phone mail address 303 corresponding to the in-company mail account 301. For this reason, the user of the cellular phone 106 can recognize that not only the arrival of an E-mail but that E-mail has an attached file. For this reason, the user of the cellular phone 106 can process reading that E-mail which received a message and its attached file from PC of a place where one has gone etc. In the mail report device 100 of this embodiment, when predetermined time passes, incoming call notice mail is transmitted to the cellular phone 106 corresponding to the case where a predetermined e-mail address has the arrival of an E-mail. However, it is not limited to this, but when predetermined time passes, it may be made to transmit the notice mail of the purport that there is no arrival of an E-mail. In this case, there is an effect of being able to recognize the existence of an E-mail which should receive a message at predetermined time.

[0062]Although this embodiment explains the mail report device 100 independently built by LAN101, the function of the mail report device 100 may be made to build in the company mail server 102. When it changes in this way, the effect of this mail report device 100 mentioned above only with the company mail server 102 can be realized.

[0063]Although the mail report device 100 is formed on LAN101 built in the company and the case where the E-mail which received a message in the mail address corresponding to the in-company mail client 103 is processed is explained by this embodiment, An Internet Service Provider has this mail report device 100, and may be made to connect with the company mail server 103.

[0064]When an Internet Service Provider has the mail report device 100, It may be made to notify the arrival of the E-mail it not only connects with the company mail server 103 like this embodiment, but transmitted to the mail address corresponding to the individual contract client which carries out a dialup connection to the cellular phone 106 which the user owns. Since an E-mail can be taken out from PC etc. by carrying out a dialup connection only when the arrival of an E-mail is notified by the cellular phone 106 when it changes in this way, the communication cost generated when carrying out a dialup connection is reducible.

[0065]

[Effect of the Invention]As explained above, when according to this invention the existence of the arrival of an E-mail to an in-company mail account is judged and there is arrival of an E-mail, Since that was notified to the cellular-phone mail address corresponding to the in-company mail account by E-mail, the arrival of an E-mail can be recognized at the time of going out.

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CLAIMS

[Claim(s)]

[Claim 1] A mail report device comprising:

A storage parts store which memorizes a mail address of a cellular phone corresponding to a predetermined e-mail address.

A mail sending part which transmits an E-mail to a mail address of said cellular phone memorized by said storage parts store, A control section which makes said mail sending part transmit incoming call notice mail to a mail address of said cellular phone corresponding to the e-mail address concerned when said predetermined e-mail address has the arrival of an E-mail.

[Claim 2] The mail report device according to claim 1 when said control section makes incoming call notice mail transmit to said mail sending part, wherein it makes the text of an E-mail which received a message in said predetermined e-mail address transmit collectively.

[Claim 3] When said control section is [the number of characters of the text of said E-mail which received a message] the number of characters which can be displayed with a cellular phone corresponding to a mail address of said cellular phone, while making the text of said E-mail which received a message transmit to said mail sending part, The mail report device according to claim 2 making only said incoming call notice mail transmit when it is over the number of characters which can be displayed with said cellular phone.

[Claim 4] When said control section is over the number of characters which the number of characters of the text of said E-mail which received a message can display with a cellular phone corresponding to a mail address of said cellular phone, The mail report device according to claim 2 making only the number of characters which can be displayed with said cellular phone among the texts of said E-mail which received a message transmit to said mail sending part.

[Claim 5] The mail report device according to any one of claims 1 to 4 when said control section is [said E-mail which received a message] multi-part mail, wherein it makes incoming call notice mail of multi-part mail transmit to said mail sending part.

[Claim 6] The mail report device according to any one of claims 1 to 5, wherein said control section judges arrival of an E-mail to said predetermined e-mail address set as a mail server.

[Claim 7] A cell phone unit which has a mail address corresponding to said

predetermined e-mail address, and can receive said incoming call notice mail from the mail report device according to any one of claims 1 to 6.

[Claim 8]As opposed to a mail address of a cellular phone beforehand set up corresponding to said predetermined e-mail address when it judged whether a predetermined e-mail address has the arrival of an E-mail and said predetermined e-mail address had the arrival of an E-mail, A mail notification method notifying by E-mail said predetermined e-mail address that a message was received in an E-mail.

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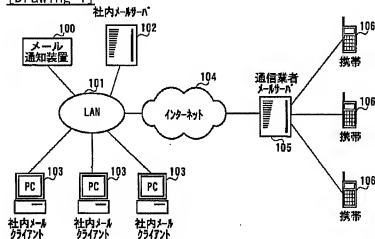
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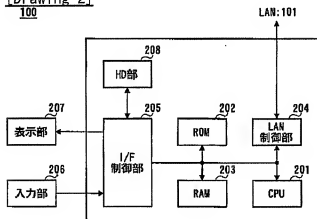
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DRAWINGS

[Drawing 1]



[Drawing 2]



[Drawing 3]

